

SURVEY OF TECHNIQUES
USED TO PROMOTE
RETROFITTING OF
SEISMICALLY
HAZARDOUS BUILDINGS

**Summary
of
Results**

INSTITUTE OF GOVERNMENTAL
STUDIES LIBRARY

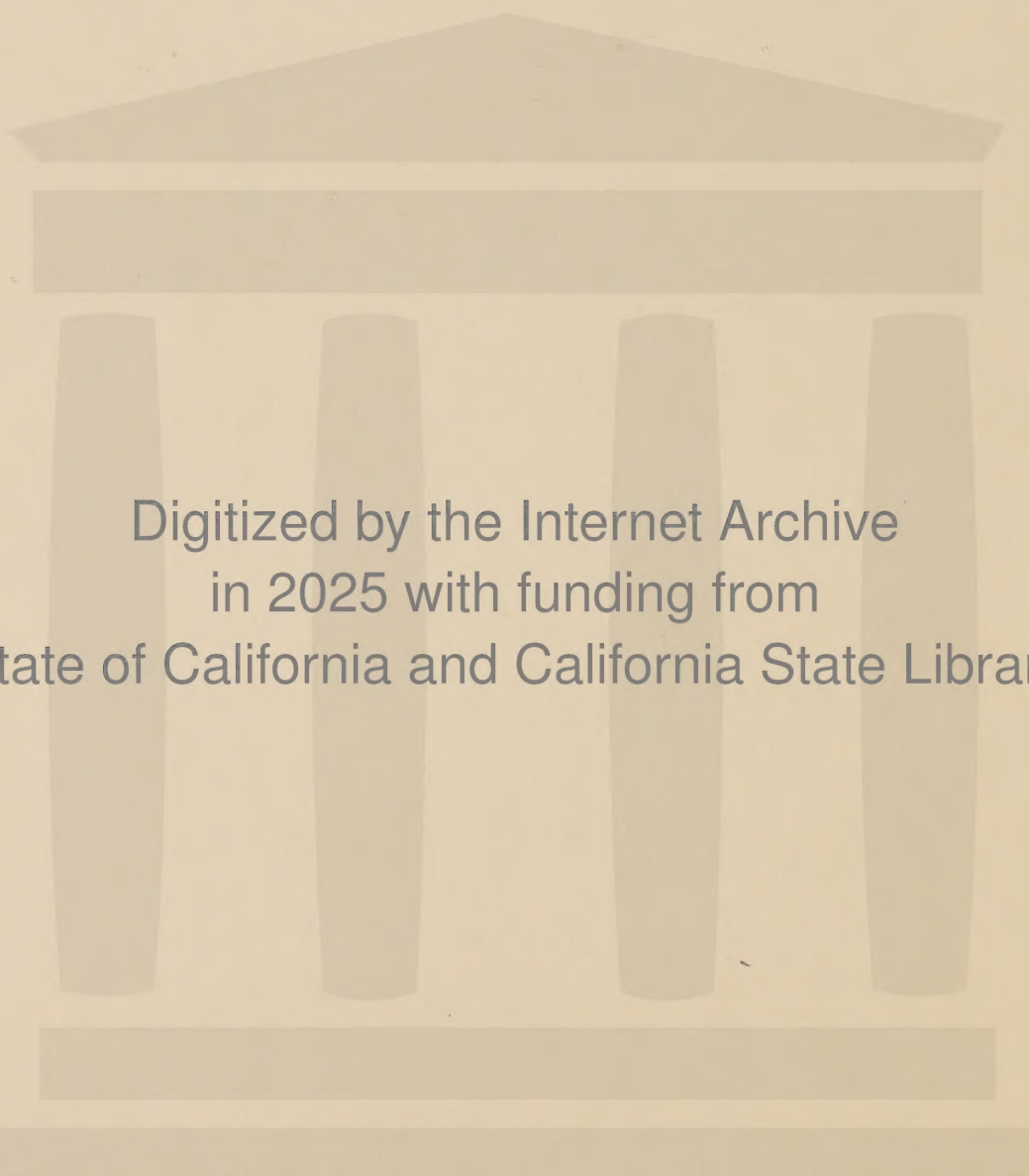
AUG 25 2000

UNIVERSITY OF CALIFORNIA

By

The Association of Bay Area Governments
for
The State of California Seismic Safety Commission
and
The Bay Area Regional Earthquake Preparedness Project

October 1991



Digitized by the Internet Archive
in 2025 with funding from
State of California and California State Library

<https://archive.org/details/C124922425>

00 01073

*Survey of Techniques Used to Promote
Retrofitting of
Seismically Hazardous Buildings:*

SUMMARY OF RESULTS

PURPOSE

At the request of the California Seismic Safety Commission and the Bay Area Regional Earthquake Preparedness Project, the Association of Bay Area Governments (ABAG) in August of 1991 conducted a survey of managers of California's 520 cities and counties to determine whether jurisdictions are offering property owners incentives to promote the retrofitting of privately owned seismically hazardous buildings. The following is a summary analysis of survey findings.

One goal of the survey is to identify unique incentive programs developed by local jurisdictions to promote retrofitting. Appendix A contains a summary of techniques suggested by survey respondents to complement those listed in the survey. We will research further several of these methods, which will be included in a handbook outlining methods jurisdictions can use to finance and otherwise promote the retrofitting of seismically hazardous buildings.

SUMMARY OF FINDINGS

1. Nearly 30% of survey respondents indicated that retrofitting seismically hazardous buildings is a high priority in their jurisdiction, with another 28% assigning a medium priority to retrofitting.
2. 36% of respondent jurisdictions have enacted mandatory retrofit ordinances while 10% have enacted parapet abatement ordinances.
3. More than 80% of the respondent jurisdictions have conducted a survey to identify Unreinforced Masonry buildings (URMs). 37% of jurisdictions have surveyed structures with URM infill or veneer. Fewer than 15% of respondents have identified each of the five other types of seismically hazardous buildings listed in the survey.
4. Less than 13% of total respondents indicated that they provide locally funded financial incentive programs. The survey listed four such programs, each of which had been "heard of" or "looked into" by at least 58% of respondents. The one most

often implemented, waiver of application and/or plan review fees, is offered by 6.4% of survey respondents.

5. The survey listed six State and Federally funded financial assistance programs. The Federal Community Development Block Grants and the Small Business Administration Loan programs are the most widely known, with 67% and 66% of respondents respectively indicating they "have heard of" them. The two least well known programs are Marks Historic Bond Act funding, recognized by 37%, and Proposition 77, recognized by 40% of respondents. Between 12% and 19% of respondents provide information on Federal and State programs to owners of seismically hazardous structures. Only 10% of responding jurisdictions know of owners who have used these programs.
6. 13% of respondents have relaxed regulatory restrictions in order to promote retrofitting of privately owned seismically hazardous structures. All three of the non-financial incentive programs which we listed in the survey are utilized by respondents. Waiving full compliance with building code is the most popular non-financial incentive, followed by waiving of other zoning limitations and finally by zoning use variances.
7. 50% of all survey respondents (75% of the jurisdictions responding to the question) reported that they *do not feel* that a lack of incentives has detrimentally affected the amount of seismic retrofit work being performed in their jurisdictions.
8. Approximately one dozen jurisdictions identified incentive programs not explicitly listed on the survey. A summary of these responses is contained in Appendix A of this report.

METHODOLOGY

The survey questionnaire was developed by ABAG staff with the assistance of a Review Committee consisting of local, regional and State officials as well as representatives from the private sector. The questionnaire was mailed to the city/town manager or chief administrative officer in each of California's 462 cities and towns and 58 counties. Of the total of 520 surveys mailed, ABAG received 173 replies representing a return rate of approximately 33%. The surveys were for the most part very thoroughly completed: with the exception of questions 11 and 12, all the questions were answered by at least 90% of respondents. The data from these surveys constitute the basis for the information presented herein. A copy of the survey, annotated to show response percentages, is attached as Appendix B.

SURVEY RESULTS

INVENTORIES AND ORDINANCES:

The majority of survey responses (62.2%) came from municipalities with populations less than 50,000. A total of 57.6% of the respondents consider retrofitting a high (29.7%) or medium (27.9%) priority issue. While 9.9% of respondents have parapet abatement ordinances, 36.1% of respondent jurisdictions have mandatory Unreinforced Masonry Buildings (URM) retrofit ordinances.

81.4% of the respondent jurisdictions have completed a survey of URMs (not surprising, as the State mandated that jurisdictions located in Seismic Zone 4 complete such surveys by January 1990. 135 of the 161 cities and 6 of the 12 counties responding to the survey are located in Seismic Zone 4.) 36.6% of respondents also completed a survey of structures with URM infill or veneer. The survey listed five additional types of hazardous structures: wood-frame structures, non-ductile concrete frame, tilt-up concrete structures, structures with "soft" first story, and structures in geologically hazardous areas. Between 7% and 13.4% of respondents have conducted surveys to identify each of those types of structures.

RETROFIT INCENTIVES:

Locally Funded Incentives

12.8% of respondent jurisdictions provide locally funded financial incentives to private property owners. The survey listed four types of locally funded programs: waiver of application and/or plan review fees, local loan program, other general fund subsidized program, and special purpose bonds (i.e. Mello-Roos bonds, etc.) Each of the locally funded incentive programs had been "heard of" or "looked into" by at least 58.2% of the survey respondents. However, few respondent jurisdictions have implemented any of the locally funded programs listed. Programs offering waivers of application and/or plan review fees have been implemented by 6.4% of the respondents, local loan programs are offered by 4.7% of respondents, special purpose bonds have been used by 1.7% of respondents, and other general fund subsidized programs are offered by 0.6% (one respondent.) Nearly 80% of jurisdictions report that owners of seismically hazardous structures have not taken advantage of local financial incentives (which is not surprising as very few jurisdictions offer such programs.)

Federal and State Programs

The survey listed six Federal and State funded financial assistance programs: Federal Community Development Block Grants, Investment Tax Credits, Proposition 77, Small Business Administration Loans, Marks Historic Bond Act funding, and Housing and Community Development Department Loans. Between one- and two-thirds of respondents (36.6-66.9%) had heard of each of these programs. Far fewer (12.2-18.6% of respondents) provide information on these programs to owners of seismically hazardous buildings. The

program most commonly "heard of" (66.9%) and described to owners (18.6%) was the Federal Community Development Block Grant program. Small Business Administration Loans were also well known (66.3% of respondents had "heard of" the program) and information on the program was provided to owners by 15.7% of respondent jurisdictions. Those programs least "heard of" and described were Marks Historic Bond Act funding (43.6% have "not heard of" the program, 36.6% "have heard of" it, and 12.2% provide information on it) and Proposition 77 (38.4% have "not heard of" the program, 39.5% of respondents "have heard of" it, and 15.1% provide information about it.) 84.3% of jurisdictions responding to the survey knew of no owners in their jurisdictions who had used any of the Federal or State programs.

Relaxed Regulatory Restrictions

(A technical note: Relaxed regulatory restrictions were addressed in questions 11 and 12. Question 11 of the survey called for a response pattern markedly different from the earlier questions. Respondents which do not offer relaxed regulatory restrictions were instructed to skip questions 11a and 11b. Of the total 173 respondents, only 37 were eligible to answer these questions. Question 12 was designed to be answered by those jurisdictions not eligible to answer questions 11a and 11b. 118 jurisdictions responded to question 12. Appendix C contains tables depicting responses to questions 11a, 11b and 12 in both numeric and percentage terms. For the sake of clarity and accuracy, the information derived from these questions is presented here both in percentage terms and as absolute numbers.)

12.8% of survey respondents (37 in number) have established programs of relaxed regulatory restrictions designed to serve as non-financial incentives to promote retrofitting by owners of private properties. Each of the three relaxed regulatory restrictions listed in the survey (zoning use variances, waiving of other zoning limitations, and waiving full compliance with building code) were implemented by respondents to the question. Thirteen jurisdictions (35.1% of those offering regulatory incentives, 7.5% of total respondents) are waiving full compliance with the building code. Nine jurisdictions (24.3% of those offering regulatory incentives; 5.2% of total respondents) are waiving other zoning limitations, while zoning use variances are granted by six jurisdictions (16.2% of those offering regulatory incentives, 3.5% of total respondents.) When asked whether owners in their jurisdictions had taken advantage of any of the three incentive programs, an equal number of respondents replied "yes" and "no" (in each case 13 in number, representing 34.2% of eligible to answer the question or 7.5% of total respondents; 12 eligible jurisdictions did not answer the question.)

The survey asked that those respondents who have not established any incentive programs indicate whether the lack of incentives has detrimentally affected the amount of seismic retrofit work being performed in their jurisdictions. 18.5% of survey respondents (27.1% of those answering the question, or 32 jurisdictions) replied that the lack of incentives is detrimental. 49.7% of the survey respondents (72.9% of those who answered the question or 86 jurisdictions) indicate they do not feel a lack of incentives has detrimentally affected the amount of seismic retrofit work being performed in their jurisdiction.

CONCLUSION

Whether one finds the results of this survey encouraging or demoralizing depends upon whether one focuses on the donut or the hole. California cities and counties are clearly aware that seismic safety is an area of concern to them; over 50% consider it a medium to high priority. Few, however, have done much about it. Many jurisdictions have heard of some of the tools which are available to them as they try to address the problem of providing incentives to owners of hazardous structures to retrofit their buildings. Few, however, have heard of all of them and even fewer have attempted to use them, much less build them into comprehensive programs. Redevelopment agencies, for those jurisdictions which have them and particularly for those which have wealthy ones, figure prominently as a source of financing and as a focal point for the development of seismic retrofit programs.

It is very clear from the survey that we are a long way from offering comprehensive retrofitting programs to all who need them. Jurisdictions' knowledge of the tools available to them is spotty and implementation is very sparse. Further, while it may simply be rationalization for inaction, many jurisdictions seem to feel that no more retrofitting would be done with their encouragement than is done without it. Jurisdictions' low level of knowledge, motivation and activity may well result from the discouraging enormity of the problem and the apparent lack of "off-the-shelf" solutions. The concept of a handbook which will illustrate the types of programs jurisdictions can offer to owners seems particularly timely. If the handbook offers practical solutions, is clearly written, and is widely disseminated, it seems likely that many more jurisdictions will be encouraged seriously to consider developing and offering incentive programs to promote the retrofitting of privately-owned seismically hazardous buildings.

APPENDIX A:

Additional Incentive Programs Identified by Survey Respondents

APPENDIX A:

Additional Incentive Programs Identified by Survey Respondents

The *Survey of Techniques Used to Promote Retrofitting of Seismically Hazardous Buildings*, administered to 58 counties and 462 cities and towns in California, was designed to measure the efforts of jurisdictions to promote the retrofitting of privately owned seismically hazardous buildings. Among the issues examined by the survey were respondents' levels of awareness and use of three different types of incentive programs: (1) locally funded incentive programs, (2) Federal and State funded financial assistance programs and (3) incentive programs based on relaxed regulatory restrictions. Questions 7, 9 and 11a of the survey listed several programs in each category, inquired about the respondents' familiarity with those programs, and requested that respondents make us aware of any additional programs in those areas. The following is a compilation of the responses to those questions.

Locally Funded Incentive Programs (Question 7 of the Survey)

This question listed the following locally funded financial incentive programs designed to encourage retrofitting of privately-owned seismically hazardous structures and asked respondents to indicate whether they had heard of the program, had explored it as an option for their communities, or had implemented such a program. The question elicited the following responses:

	have heard of	have looked into	have imple- mented	have not heard of
Waiver of Application and/or Plan Review Fees	47.7%	19.8%	6.4%	18.6%
Local Loan Program	40.7%	19.8%	4.7%	27.9%
Other General Fund Subsidized Program	44.2%	14.0%	0.6%	32.6%
Special Purpose Bonds (i.e. Mello-Roos Bonds, etc.)	51.2%	15.1%	1.7%	21.5%

This question also asked respondents to "Please let us know too if other locally funded programs exist which we should explore." In response to this request, the following respondent jurisdictions made these additional comments:

Albany - The city plans on using CDBG funds because all the affected buildings lie within the CDBG target area.

Bellflower - Cites URM abatement as a goal of their recently adopted redevelopment plan.

Claremont - Presently working with the Claremont Economic Development Commission to develop a program of financial incentives.

Clearlake - Indicates some local funding through the redevelopment agency.

Hanford - A low-interest loan program to be funded by the redevelopment agency is being implemented.

Morro Bay - Looking into economic development loans from HCD (State Housing and Community Development Department).

Palo Alto - Guidelines allow for an increase in the square footage and a parking exemption for replacement or retrofit of substandard buildings.

Rancho Cucamonga - Mentions CDBG funds.

Redondo Beach - Mentions the use of Proposition 77 funds for assistance in low income housing areas.

Redwood City - Does not require plan review fees for review of engineering reports on URM's.

Riverside - In the initial stages of forming a voluntary assessment district.

San Diego - The city is investigating two sources of funding: revenue bonds to fund low interest loans and tax increment monies from the redevelopment agency.

San Francisco - The city is looking into the development of a voluntary assessment district.

Santa Clara - The city is planning to offer loans to owners of seismically hazardous buildings to fund engineering analyses.

Santa Cruz Co - All fees waived for repair and seismic retrofit permits for 14 months following 1989 earthquake. Subsidy comes from FEMA and State disaster funds.

San Mateo - Cites redevelopment agency and CDBG as sources of funds.

Torrance - The redevelopment agency subsidizes engineered retrofit plans at a rate of \$0.50 per square foot of building.

Upland - A local loan program based on CDBG funds.

Federal and State Funded Financial Assistance Programs
(Question 9 of the Survey)

This question listed the following Federal and State funded financial assistance programs, asking whether the respondents have heard of the program, and, if so, whether they provide information on the program to owners of seismically hazardous structures. This question elicited the following responses:

	have heard of	provide info on	not heard of
Federal Community Development Block Grants	66.9%	18.6%	13.4%
Investment Tax Credits	57.0%	14.5%	24.4%
Proposition 77	39.5%	15.1%	38.4%
Small Business Administration Loans	66.3%	15.7%	16.3%
Marks Historic Bond Act Funding	36.6%	12.2%	43.6%
Housing and Community Development Dept Loan	42.4%	18.0%	32.0%

The question also asked respondents to "Again, please let us know of any State or Federally funded programs not listed below which we should explore." In response to this request, the following respondent jurisdictions made these additional comments:

Claremont - Included the financial assistance programs which we listed in a staff report to the City Council on June 11, 1991.

Los Gatos - Mentioned a source of funds from CALDAP: a State-funded, low-interest, deferred payment loan program to repair quake damaged buildings.

Rancho Cucamonga - Mentions the 1915 Bond Acts (Special Assessment Bonds) and the Mills Act.

San Mateo - Mentions redevelopment area funding as a source.

Torrance - The city provides information on Prop SCA 33 and AB 43 (Floyd). This legislation broadened the definition of seismic retrofits that are exempt from property tax increases. This exemption from reassessment holds for the retrofit of any type of building not just one classified as a URM.

Vacaville - Mentions redevelopment area funding as a source.

Relaxed Regulatory Restrictions
(Question 11a of the Survey)

This question listed the following relaxed regulatory restrictions, asking which the respondents have heard of, looked into and/or implemented, and elicited the following responses:

	have heard of	have looked into	have implemented	not heard of
Zoning Use Variances	16.7%	16.7%	16.7%	8.3%
Waiving of Other Zoning Limitations (i.e. height, density, parking, etc.)	8.3%	16.7%	2.5%	8.3%
Waiving Full Compliance with Building Code (re: handicap access, asbestos abatement, electrical and mechanical systems, etc.)	2.8%	11.1%	36.1%	5.6%

Unlike the other two questions, this question did not specifically ask for information about programs not listed but allowed space for comment under "Other (Explain)." The following respondent jurisdictions made these additional comments:

Apple Valley - Retrofit of entire structure is required when making structural modifications or additions to existing structure.

Mill Valley - Allows the use of the State Historical Building Code on appropriate structures and will delay full compliance by 2 years if wall anchors are installed sooner than otherwise required.

Rancho Cucamonga - Allows the use of the State Historical Building Code.

San Leandro - Will not require structure be brought up to handicap access code if retrofit is performed.

Santa Monica - Will exempt low occupant load buildings and allow up to a 10 year phase-in of strengthening requirements.

Walnut Creek - The required level of strengthening is less than UBC requires for new construction. If wall anchors and parapet braces are installed within 2 years of ordinance adoption (June 1989), the time for complete compliance is extended from 5 years to 8 years.

APPENDIX B:

**Survey of Techniques Used to Promote
Retrofitting of
Seismically Hazardous Buildings
(Annotated)**

SURVEY OF TECHNIQUES USED TO PROMOTE RETROFITTING OF SEISMICALLY HAZARDOUS BUILDINGS

GENERAL INSTRUCTIONS: Most questions can be answered by simply checking the square next to the most appropriate answer. Unless a question indicates that multiple answers are appropriate, choose only one answer. If you wish to make more extensive comments than space allows, please include them on a separate sheet. Staple any extra sheets to the questionnaire so they do not become lost. When your questionnaire is completed, please fold it so ABAG's address is showing, staple it and drop it in the mailbox.

1. What is the population of your municipality? (If a county, provide population of unincorporated areas only.)

☐ less than 10,000	15.7%
☐ 10,000 to 49,999	46.5%
☐ 50,000 to 99,999	23.8%
☐ 100,000 to 299,999	11.1%
☐ 300,000 or more	1.7%

Total: 98.8%

2. What priority does your jurisdiction assign to the issue of retrofitting seismically hazardous buildings?

☐ high	29.7%
☐ medium	27.9%
☐ low	20.4%
☐ not a priority	19.8%

Total: 97.8%

3. Does your community have a parapet abatement ordinance?

☐ No	88.4%
☐ Yes	9.9%

Total: 98.3%

4. Does your municipality have an ordinance that makes retrofitting of Unreinforced Masonry Buildings (URMs) mandatory?

☐ No	61.6%
☐ Yes	36.1%

Total: 97.7%

5. Has your jurisdiction conducted a survey to identify the following types of structures:

	<u>Totals</u>		
URMs.....	☐ No 16.3%	☐ Yes 81.4%	97.7%
Structures w/ URM infill or veneer.....	☐ No 54.7%	☐ Yes 36.6%	91.3%
Wood-frame structures.....	☐ No 83.7%	☐ Yes 7.0%	90.7%
Non-ductile Concrete Frame.....	☐ No 79.1%	☐ Yes 11.6%	90.7%
Tilt-up Concrete structures.....	☐ No 77.9%	☐ Yes 13.4%	91.3%
Structures w/"soft" 1st story.....	☐ No 82.0%	☐ Yes 8.7%	90.7%
Structures in geologically hazardous areas.....	☐ No 81.4%	☐ Yes 8.7%	90.1%
Other (Please specify): _____;	# identified _____		
Other (Please specify): _____;	# identified _____		

6. Does your municipality provide locally funded financial incentives to private property owners in order to promote the retrofitting of seismically hazardous structures?

☐ No 85.5%

☐ Yes 12.8%

Total: 98.3%

7. The following is a list of locally funded financial incentive programs designed to encourage retrofitting of privately-owned seismically hazardous structures. For each program type listed below, indicate whether you have heard of the program, have explored it as an option for your community, or have implemented such a program. Please let us know too if other locally funded programs exist which we should explore. **(Check only one block per incentive program)**

have heard of	have looked into	have imple- mented	not heard of
---------------------	------------------------	--------------------------	--------------------

Waiver of Application and/or Plan Review Fees.....

Local Loan Program.....

See Appendix A for summary of this question

Other General Fund Subsidized Program.....

Special Purpose Bonds (i.e. Mello-Roos Bonds, etc.)..

8. Have owners of seismically hazardous structures taken advantage of any of the financial incentives listed under question 7?

☐ No 79.7%

☐ Yes 11.1%

Total: 90.8%

If yes, how well have the incentives worked:

9. The following is a list of Federal and State funded financial assistance programs. For each program indicate whether you have heard of the program, and, if so, whether your jurisdiction provides information on the program to owners of seismically hazardous structures. Again, please let us know of any State or Federally funded programs not listed below which we should explore. (Check all that apply)

	have heard of	provide info on	not heard of
Federal Community Development Block Grants.....			
Investment Tax Credits.....			
Proposition 77.....			
Small Business Administration Loans.....			<i>See Appendix A for summary of this question</i>
Marks Historic Bond Act Funding.....			
Housing and Community Development Dept. Loan....			
Other (Explain): _____			

10. To your knowledge have any of the programs checked in question 9 above been used by owners of seismically hazardous structures in your jurisdiction?

☐ No 84.3%

☐ Yes 9.9%

Total: 94.2%

If yes, which programs and how well have they worked:

11. Has your municipality established a program of relaxed regulatory restrictions to promote the retrofitting of privately owned seismically hazardous structures?

☐ No (If No, go to question 12) 82.0%

☐ Yes 12.8%

Total: 94.8%

- 11a. Which of the following relaxed regulatory restrictions have you heard of, looked into and/or implemented in your jurisdiction? (Check only one block per incentive program)

have	have	have	not
heard	looked	imple-	heard
of	into	mented	of

Zoning Use Variances.....

Waiving of Other Zoning Limitations...

(i.e. height, density, parking, etc.)

Waiving Full Compliance with.....

Building Code (re: handicap access,

asbestos abatement, electrical and

mechanical systems, etc.)..... See Appendix C for summary of this question

- 11b. Have owners of seismically hazardous structures in your jurisdiction taken advantage of any of the incentive programs checked in question 11a?

☐ No

☐ Yes See Appendix C for summary of this question

If yes, which and how well have they worked:

(SKIP TO QUESTION 13)

12. If your jurisdiction has not established any incentive programs, has a lack of incentives detrimentally affected the amount of seismic retrofit work being performed in your jurisdiction?

☐ No

☐ Yes See Appendix C for summary of this question

13. Please use the space below to indicate the **most appropriate person** to contact for additional information about your programs:

NAME _____ TITLE _____
 MUNICIPALITY _____
 BEST TIME TO CALL _____ ☐ AM or ☐ PM
 PHONE NUMBER: (Area Code) _____ (Number) _____

14. Unless the same as above, please provide
Your Name _____
Title _____
Phone # _____
15. If you would like to receive a summary of the data collected through this survey, please check this box: ☐
16. If you would like to receive information about a workshop on incentive programs to promote retrofitting of seismically hazardous buildings, check this box: ☐
17. If you are interested in receiving information about ABAG's Financial Services programs, please check this box: ☐

THANK YOU VERY MUCH FOR YOUR TIME, EFFORT AND COOPERATION!!!

Questions? Call Wayne Darragh at (415) 464-7909 or Dari Barzel at (415) 464-7932.

APPENDIX C:

Tables Depicting Responses to
Questions 11a, 11b and 12

APPENDIX C:

Tables Depicting Responses to Questions 11a, 11b and 12

- 11a. Which of the following relaxed regulatory restrictions have you heard of, looked into and/or implemented in your jurisdiction? (Check only one block per incentive program)

Responses by Number of Respondents	Zoning Use Variances	Waiving of Other Zoning Limitations	Waiving Full Compliance With Building Code
# instructed to skip question	136	136	136
# have heard of	6	3	1
# have looked into	6	6	4
# have implemented	6	9	13
# not heard of	4	4	3
# not answering	15	15	16

Responses by Percentage of Total Respondents	Zoning Use Variances	Waiving of Other Zoning Limitations	Waiving Full Compliance With Building Code
% instructed to skip question	78.6%	78.6%	78.6%
% have heard of	3.5%	1.7%	0.6%
% have looked into	3.5%	3.5%	2.3%
% have implemented	3.5%	5.2%	7.5%
% not heard of	2.3%	2.3%	1.7%
% not answering	8.7%	8.7%	9.3%

Responses by Percentage of Respondents to This Question (37 in number)	Zoning Use Variances	Waiving of Other Zoning Limitations	Waiving Full Compliance With Building Code
% have heard of	16.2%	8.1%	2.7%
% have looked into	16.2%	16.2%	10.8%
% have implemented	16.2%	24.3%	35.1%
% not heard of	10.8%	10.8%	8.1%
% not answering	40.5%	40.5%	43.2%

- 11b. Have owners of seismically hazardous structures in your jurisdiction taken advantage of any of the incentive programs checked in question 11a?

	# of Responses	% of Total Respondents	% of Those Eligible to Answer Question	% of Those Answering Question
No	13	7.5%	34.2%	50.0%
Yes	13	7.5%	34.2%	50.0%
No Answer	12	6.9%	31.6%	n/a
Instructed to Skip Question	135	78.0%	n/a	n/a

12. If your jurisdiction has not established any incentive programs, has a lack of incentives detrimentally affected the amount of seismic retrofit work being performed in your jurisdiction?

	# of Responses	% of Total Respondents	% of Those Answering Question
No	86	49.7%	72.9%
Yes	32	18.5%	27.1%
No Answer	55	31.8%	n/a

U.C. BERKELEY LIBRARIES



C124922425

